



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,245	02/27/2004	John E. McAlvin	2785989-000082	9461

49840 7590 03/30/2006

BAKER, DONELSON, BEARMAN,  
CALDWELL & BERKOWITZ, P.C.  
5 CONCOURSE PARKWAY  
STE. #900  
ATLANTA, GA 30328

EXAMINER

NUTTER, NATHAN M

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/789,245

Applicant(s)

MCALVIN ET AL.

Examiner

Nathan M. Nutter

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08-04, 09-04</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of species 1, claim 21, in the reply filed on 13 January 2006 is acknowledged. The traversal is on the ground(s) that the "invention is directed to a styrene-free, unsaturated polyester resin composition, and not to a specific curing agent." This is not found persuasive because applicants have not stated on the record that the use of one curing agent would be obvious over the use of the others that are recited and claimed. Indeed, resins that may be cured one way may not necessarily be cured through the use of other known curing systems.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Interpretations***

The recitation in claim 11 of "wherein the unsaturated polyester has an acid number of less than about 50" is deemed to be inherent in the unsaturated polyester broadly disclosed since the claims fail to recite any parameters that might be deemed to affect the particular acid number. Since there is no guidance, it is assumed that any unsaturated polyester usable in a coating composition, as recited in the broad claim would possess the acid number of less than 50.

The recitations in each of claims 17, 18, 19 and 20 of "up to about 10 percent by weight (claim 17)," "up to about 40 percent by weight (claim 18)," "up to about 5 percent by weight (claim 19)" and "up to about 10 percent by weight (claim 20)" do not require the presence of either constituent. As such, any reference cited against the broad claim

Art Unit: 1711

1 would embrace the recitations of each of claims 17 through 20 since those constituents are not required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claims 7 and 10, the recitations of "analogues of such monomers" are not proper since analogues are compounds having similar electronic structures but different atoms. An analogue may change the nature of a composition completely due to the different elements that may be employed. To determine what analogues might be usable, without interfering with the proposed use of the composition, would require the undue burden of experimentation.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1711

Claims 1-21 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitations in claims 1 and 25 of "contains low amounts of hazardous air pollutants," render the claims as vague and confusing. The term "low" is not specific as to any range or limitation, but is subjective. As such, the proper metes and bounds of the phrase cannot be determined. Further, the phrase "hazardous air pollutants" is not an art-recognized phrase or a proper Markush group to which known members are easily ascribed.

In claims 7 and 10, the recitations of "analogues of such monomers" are not proper since analogues are compounds having similar electronic structures but different atoms. An analogue may change the nature of a composition completely due to the different elements that may be employed. As such, the proper metes and bounds of the claims cannot be clearly and easily discerned.

Claim 15 recites the limitation "epoxy functionalized (meth)acrylate" as dependent from claim 1. There is insufficient antecedent basis for this limitation in the claim.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

Art Unit: 1711

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 and 25 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of copending Application No. 10/440,610. Although the conflicting claims are not identical, they are not patentably distinct from each other because the particular unsaturated polyester of the copending application is embraced by the recitations in the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 1711

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-21 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Hewitt et al (US 2004/0010061 A1), newly cited.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 14-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaworek et al (US 6,777,458), newly cited.

The reference to Jaworek et al (US 6,777,458) teaches the production of a coating composition that may comprise "at least one polymer and/or oligomer," P1, including unsaturated polyesters and urethane (meth)acrylates. Note column 4 (lines 1-25). The reference teaches the inclusion of "reactive diluents preferably in the amount of up to 70% by weight" based on the total weight of P1 and diluent, at the paragraph bridging column 9 to column 10, including hydroxyl functional (meth)acrylate monomers

Art Unit: 1711

(claim 10) and multifunctional (meth)acrylate monomers (claim 7) and "(m)ixtures of said reactive diluents." The reference teaches the P1 components to have a number average molecular weight of "from 400 to 2000" which overlaps with those recited in claims 2 and 3. At column 6 (lines 26-46), the reference shows the urethane (meth)acrylate to be a product of an isocyanate and an hydroxyalkyl ester of acrylic acid (claim 4). At column 4 (lines 28-47), the reference teaches that the unsaturated polyester to be epoxy functionalized (claim 14). The employment of aliphatic isocyanates is shown at column 7 (lines 12-26) as recited in claim 16. The reference shows the inclusion of other constituents, including thixotropes (claim 17) at column 10 (lines 55-65) and pigments (claim 18) at column 11 (lines 11-20). The recitations in each of claims 17-20 do not require the presence of either constituent. As such, those claims are all deemed to be met by the reference.

Although the specific compositional limitations of claim 5 urethane (meth)acrylate, claim 6 hydroxyl-functionalized (meth)acrylate monomer, claim 8 multifunctional (meth)acrylate monomer, and claim 9 unsaturated polyester, the reference shows the inclusion for the diluent constituents to be "in an amount of up to 70% by weight" which would embrace the amounts recited for these components in claims 6 and 8. The skilled artisan would know to manipulate the resin components based thereon, and based upon the availability of resins, properties desired from each as a matter of inclusion and other factors. As such, the instant claims are deemed to be obvious over the teachings of Jaworek et al (US 6,777,458). No unexpected results are shown on the record.



Claims 1-11, 16-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boeckeler et al (US 5,369,139), newly cited.

The patent to Boeckeler et al (US 5,369,139) teach the manufacture of a free radical curable resin composition that may comprise urethane (meth)acrylates and unsaturated polyesters. Note column 2 (lines 21-68) and Examples 1 and 3 at columns 5 and 6. The examples show the combination of oligomers. The urethane (meth)acrylates may be the product of a diisocyanate and an hydroxyl-functionalized (meth)acrylate monomer (claim 4). Aliphatic isocyanates may be employed at column 2 (lines 62-68) as recited in claim 16. Reactive monomers, including multifunctional (meth)acrylates and hydroxyl functional (meth)acrylates (claims 7 and 10) in combination of "one or more," are taught for inclusion at up to 30 weight percent (within the range specified for both in claims 6 and 8 at a minimum of 10 weight percent for both). The recitations in each of claims 17-20 do not require the presence of either constituent. As such, those claims are all deemed to be met by the reference.

The reference is silent with respect to the compositional limitations for each of the constituents separately. Examples 1 and 3 show a 50:50 ratio of unsaturated polyester and urethane (meth)acrylate. However, if "up to 30 weight percent" diluent reactive monomers are added, the overall weight percent for these constituents will lower to be within the combined weight percents for claims 5 and 9. A skilled artisan would know how to manipulate the constituents for desired effects, resin availability,

Art Unit: 1711

etc.. As such, the instant claims are deemed to be obvious over the teachings of the reference.

Claims 1-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaworek et al (US 6,777,458), as applied to claims 1-11, 14-21 and 25 above, and further in view of Kosono et al (US 6,992,140), newly cited.

The reference to Jaworek et al (US 6,777,458) shows essentially what is recited except the employment of the unsaturated polyester produced from an epoxy allyl ether or a hydroxyl-functionalized allyl ether as recited in claim 12.

The patent to Kosono et al (US 6,992,140) teaches the manufacture of an unsaturated polyester using an epoxy allyl ether at column 2 (lines 37-49). The resin is also shown at column 8 (lines 41-57), Reference Example 2.

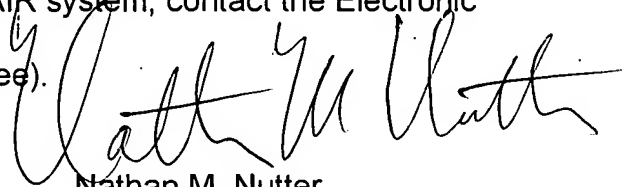
The employment of the unsaturated polyester taught by Kosono et al in the composition of Jaworek et al would have been an obvious modification to an artisan at the time the invention was made. This is deemed true especially in view of the paragraph bridging column 1 to column 2 which shows the equivalence of using unsaturated polyesters resins and urethane (meth)acrylates as shown by Jaworek et al. The employment would be deemed to be conventional. Nothing unexpected or surprising has been shown on the record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

Art Unit: 1711

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Nathan M. Nutter  
Primary Examiner  
Art Unit 1711

nmn

28 March 2006